

### REMARKS

Applicant acknowledges that the examiner withdrew the rejections of claims 1-10 and 14, under 35 U.S.C. 112, second paragraph, as pertaining to "process."

The examiner rejected Claims 11-13 under 35 U.S.C. 112, second paragraph, as being indefinite. The examiner contends that:

"the availability process determines travel options using availability data has been determined to be "low-quality" and treats this data as though it were "high quality" data, is unclear to the Examiner in how this phrase further limits claim 1, or how one set of data is treated as though it were another set of data in this claim. In particular, it is unclear what the applicant means "low-quality data" and "high-quality data" and how the system/method would process these data in a similar or differential manner.

Applicant's claims 11-13 are definite within the meaning of 35 U.S.C. 112, second paragraph. One of ordinary skill in this art would be able to readily determine the metes and bounds of applicant's claims and specifically the meaning of the availability process determining travel options using availability data that has been determined to be "low-quality" and treating this data as though it were "high quality" data. Simply stated, one of ordinary skill in the art would understand that some sources of seat availability data produce high quality data, whereas others produce low quality data. For this aspect of the invention, the invention treats the data in processing of travel option as if it were high quality data, to provide some potential improvement in processing performance.

Therefore, claim 11 clearly further limits claim 1 since it varies the processing that would otherwise occur. This would be apparent to one of ordinary skill in the art. Nevertheless, if one of ordinary skill in the art needed assistance in understanding these features of "low-quality" and "high quality" data, one could consult the numerous passages in Applicant's specification that discuss this. For instance, on page 8, line 23, Applicant states:

The different sources 65, 66 each have different properties, including the cost (in time, computation, communication, or money) of performing a query and the quality (age/freshness, confidence, precision, or validity). Sometimes all costs are

negligible, such as when querying a cache; other times the costs are substantial, such as when submitting live queries directly to the airlines (costly in time, communication, and money since the airlines often charge a transaction fee). When a source is expensive, it is desirable to contain these costs.

Thus, one of skill in the art would understand that low quality is, e.g., where the quality (age/freshness, confidence, precision, or validity) is not as good as a source with higher quality, e.g., (age/freshness, confidence, precision, or validity).

How one set of data is treated as though it were another set of data would also be within the skill of one in the art. For example Applicant also describes that:

The ordering process ordering of operations for an "After Faring" strategy is shown. The process determines legs of using a scheduler and determines fares using a faring process. The process makes use of the low-quality low-cost source of availability information, assume every seat is available in every booking class. Computation proceeds as if the low-quality speculatively guessed data were high quality, in the sense that the origin of the data does not affect the computational processes. This process uses speculative computation 105 to determine results. Instead of spending the cost to acquire and process actual answers, the system speculates 105 as to what the answers might be and expends computation to ascertain what the results would be were the speculation true.

Thus, in this example Applicant teaches to use the low quality speculatively guessed data as if it were high quality data, to provide some overall computational benefits. Accordingly, this rejection is improper and should be removed.

Applicant's response to the Examiner's comments

The examiner furnishes extensive reasons why the examiner disagreed with Applicant's previous response. Applicant will address certain of the more important comments made by the examiner in the interest of brevity, but suffice it to say that Applicant in general disagrees with the contentions raised by the examiner. The examiner states that:

(B) The Applicants argue that the Lynch reference does not process seat availability information, as required by the limitations of claim 21 in particular.

In response, the Examiner respectfully disagrees with the Applicant's interpretation of the art, and in particular with the Applicant's narrow interpretation of the term "seat availability data" in the current claim language.

Applicant contends that the examiner must give the term "seat availability" the reasonable and customary meaning that the term is accorded in the industry. The examiner has not provided either a reasonable basis or justification for ignoring the meaning of the term as used by the industry or supplied an alternative definition from an authoritative source.

In construing features of Applicant's claims such as "seat availability information" the Examiner ignores guidance from the Federal Circuit such as in *In re Morris*<sup>1</sup> which stands for the proposition that while the Office is entitled to construe claim terms using their "broadest reasonable meaning," the Examiner must apply the Court's guidance on what "reasonable" means:

"Since it would be unreasonable for the PTO to ignore any interpretive guidance afforded by the applicant's written description, either phrasing connotes the same notion: as an initial matter, the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, *taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description* contained in the applicant's specification." [emphasis supplied]

According to *Morris*, the examiner must apply the broadest reasonable meaning "in their ordinary usage as they would be understood by one of ordinary skill in the art." The examiner has not provided any basis upon which one of ordinary skill in the art would construe seat availability information to be anything other than how Applicant uses it in the claims and specification. Moreover, in *Morris*, the specification lacked any text to guide the Examiner in construing what the disputed claim term meant. Based on the absence of any such text, the Court stated that the Examiner's interpretation was reasonable:

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<sup>1</sup> *In re Morris*, 127 F.3d 1048 (Fed. Cir. 1997).

“Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the PTO's definition unreasonable when the PTO can point to other sources that support its interpretation.”

In the present application, the written description discusses seat availability information, seat availability predictors and other sources of seat availability information in great detail and distinguishes those systems and that data from other systems and data commonly used in, e.g., the airline industry. There is no ambiguity, as there was in *Morris*. Nevertheless, the examiner, by construing seat availability to mean anything other than how Applicant and the industry uses that term, improperly ignores Appellant's specification and the meaning given to those terms by the art.

Appellant does not ask the examiner to read limitations into the claims as was the case in *In re Van Geuns*<sup>2</sup>. In *Van Geuns*, the specification disclosed a magnet assembly used for NMR. The claim, however, recited a magnet assembly that provided a uniform magnetic field, with no mention of NMR. The cited reference disclosed a magnet assembly that generated a relatively uniform field. *Van Geuns* is inapplicable to the present case, because the claim element “availability predictor” is expressly defined in the specification and positively recited in the claim. This is not a case in which the claim recites an unspecified type of information and systems to produce such information, and the Examiner is being asked to import the specification's description of “seat availability information” or “seat availability predictors and sources of seat availability data” to mean “the unspecified type.” Rather, this is a case in which the claim recites a particular feature and the examiner must either find that feature in the prior art, and not conflate it with non-relevant teachings from a non-relevant reference or allow the case. The examiner is not free to simply ignore the features that the examiner is unable to find. Therefore, the specification is available to the examiner to help her understand what “seat availability” information, “seat availability” predictors, and sources of “seat availability” data are.

Thus, it is well established that in construing a claim term, the Examiner may properly review the specification. In the present case, the Examiner is attempting to construe “seat

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<sup>2</sup> *In re Van Geuns*, 988 F.2d 1181 (Fed. Cir. 1993).

availability information and "seat availability predictors," and "sources of seat availability data" without the benefit of the guidance offered by Appellant's specification. In rejecting such guidance, the Examiner has been cast adrift, so much so that she now ascribes no meaning or distinction to these terms. The examiner states that:

**As to applicant's arguments use differing quality properties in generating availability data, the Lynch reference clearly states that the system determines the age of the availability data and also determines how well the availability data meet the certain parameters entered by the user (col. 6, lines 10-61). In other words, the system determines the age and fitness or usefulness of the availability data—two qualities of the availability data."**

This contention is incorrect. Applicant did not argue nor did Applicant claim to "use differing quality properties in generating availability data." Rather, Applicant claims clearly define that the techniques determine quality properties of the availability information ... and based on the quality properties determines whether to send another query to the first source of seat availability or a different one of the multiple sources of seat availability information. In no sense, however, do the claims use the quality properties in generating availability data as the examiner argues.

The examiner also argues that: "... the Lynch reference clearly states that the system determines the age of the availability data and also determines how well the availability data meet the certain parameters entered by the user (col. 6, lines 10-61). In other words, the system determines the age and fitness or usefulness of the availability data—two qualities of the availability data. Applicant responds that in the cited passages from Lynch fail to disclose seat availability data but rather discloses to update inventory data. Lynch defines inventory data as:

**For airline flights, the inventory information may specify all flights between each particular city of departure and city of destination (otherwise known as a "city pair"), the arrival and departure times of the flights, the airline carriers providing such flights, a description of each flight as either direct or non-direct, the breakdown of all non-direct flights into separate legs or "segments," the identification of each segment of a flight as either domestic or international, the fare classes available on the flights, and pricing information (e.g., one-way ticketing, round-trip ticketing, city-to-city ticketing, or end-to-end ticketing) that can be used to determine the rates of various flights. [Lynch '094 Col. 4, lines 11-23].**

Lynch further updates inventory data based on the age of the inventory data. Lynch's query schedule is guided only by a property of Lynch's system, a time period which is fixed in

Lynch's system before retrieving any solutions. Lynch does not suggest altering the query schedule by determining quality properties including at least one of confidence, precision and validity. As for the usefulness of the data, that is not related to a quality of the source of availability data, but again is related to a property of Lynch's system.

The examiner argues that "The current claim language does not provide a definition or description of which qualities are determined by the system and the Applicant fails to point to any specific sections of the specification that define the term "quality properties." This is incorrect, claim 1 for instance specifies "... with the quality properties including at least one of confidence, precision and validity ...." In addition, throughout prosecution, Applicant has pointed out many instances in Applicant's specification where the terms quality properties are described and used.

The examiner also argues that Applicant's arguments were: "against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant has argued that the references individually and as combined do not teach the features of Applicant's invention.

#### The Rejections

The examiner rejected claims 1-4, 11, 13, 15, 16, 19, 21-23, 26 and 29-32 under 35 U.S.C. 103(a) as being unpatentable over by Lynch et al (US Patent No. 6,119,094).

The examiner rejected Claims 5-8, 10, 18, 20, 25, and 27 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Lynch et al (US Patent No. 5,839,114).

The examiner rejected Claims 9, 17 and 24 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Walker et al (US Patent No. 5,897,620).

The examiner rejected Claim 12 and 33-34 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Hornick (US Patent No. 5,270,921).

The examiner rejected Claim 14 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Slotznick (US 5,983,200).

The examiner rejected Claim 28 under 35 U.S.C. 103(a) as being unpatentable over by Lynch et al (US Patent No. 6,119,094) in view of Official Notice.

Claim 1

Claim 1 is allowable over Lynch '094, since Lynch '094 does not suggest ... an availability process that accesses seat availability information from multiple sources of seat availability information, ... determines quality properties of the availability information from the first source of seat availability information, with the quality properties including at least one of confidence, precision and validity and determines, based on the quality properties, whether the first source of seat availability information is reliable, and if the results are not reliable, the availability process executes a second set of seat availability queries to the first source or a different one of the multiple sources of seat availability information based on the outcome of determining quality properties ... .

The examiner considers that Lynch '094 teaches

... an (availability) component to search/access seat availability information from multiple sources of seat availability information, receives the instances of transportation and uses the results from a first source of multiple sources of seat availability information for a mode of transportation to determine a set of travel options (i.e. instances of transportation) (col. 6, lines 41-56; col. 7, lines 8-20; lines 29-32; col. 9, line 47-col. 10, line 5)

determines quality properties of the availability information from the first source of seat availability information, with the quality properties including at least one of confidence, precision, and validity (column 2, lines 60-65; figure 3, column 6, lines 11-57, col. 7, lines 46-49)

determines, based on quality properties, whether the first source of seat availability information reliable, and if the results are not reliable, the availability process executes a second set of availability queries to the first or a different one of the multiple sources of seat availability information based on the outcome of determining quality properties to provide a second set of instances of transportation for which seat is available. (See Lynch'094: col. 2, lines 60-65; col. 6, lines 22-38; Figure 3)

Applicant contends that Lynch '094 fails to suggest claim 1. The examiner contends that Lynch '094 teaches "an (availability) component to search/access seat availability information from multiple sources of seat availability information ..." at (col. 6, lines 41-56; col. 7, lines 8-20; lines 29-32; col. 9, line 47-col. 10, line 5). No such teachings are found at the cite passages or elsewhere.

Lynch '094 does not teach to "determine quality properties," as recited in claim 1. The examiner contends that this is taught at (column 2, lines 60-65; figure 3, column 6, lines 11-57, col. 7, lines 46-49). While Lynch '094 does use the term "available" in Col. 2, it does not appear that Lynch '094 is dealing with seat availability data from an airline. Rather, Lynch '094 uses available in the sense that something can be "gotten, had, or reached; handy; accessible."

Fig. 3 merely discusses an update of data propagated from a CRS and training of genetic algorithms. Col. 6, lines 11-57 discuss updating depicted in Fig. 3 that occurs if a predetermined time has elapsed and inventory information, "such as, for example, all flights between each city pair, airline carriers providing the flights, fare classes available on the flights, a description of each flight as either direct or non-direct, the breakdown of all non-direct flights into separate segments, and the identification of each segment of a flight as either domestic or international." In Col. 7 Lynch '094 discusses conventional input needed to provide a travel solution, "At block 204, system 10 receives travel request information, which may be input by a travel agent. The travel request information preferably specifies, at a minimum, a departure city and a destination city (a city pair), and the tentative times and/or dates of travel. The travel request information may also specify additional parameters for travel, such as, for example, a particular airline carrier, fare class, or exact date of travel."

However, nowhere does Lynch '094 determine quality properties of the first source of seat availability information or executes a second set of availability queries to the first or a different one of the multiple sources of seat availability.

In any event assuming *arguendo* that Lynch '094 discloses availability information, claim 1 requires more. Claim 1 requires ... an availability process that accesses seat availability information from multiple sources of seat availability information ... determines quality properties of the availability information from the first source of seat availability information and determines, based on the quality properties, whether the first source of seat availability information is reliable. As applicant notes in the specification,

The process 70a first uses a cache or other predictive type source 66 to provide an initial set of queries and then performs a live query to airline yield management or availability systems 65. The cache queries are quick and cheap to perform, but can have



stale or incorrect data. The live queries are expensive. Therefore, only a few can be made per travel planning session. However the live queries are up-to-date and correct.

Thus, assuming that Lynch '094 implicitly discusses availability information, there is no basis upon which to infer that Lynch '094 discloses anything other than performing a live query to a source of availability information (airline yield management system) that is known to be correct. Therefore, Lynch '094 inherently would not suggest to determine quality properties of the availability information from the first source of seat availability information, or based on the quality properties,... execute a second set of seat availability queries to the first source or a different one of the multiple sources of seat availability information ... because the data from such sources is already as correct.

Claims 2-14 and 28-34, which depend directly or indirectly from claim 1 are allowable at least for the reasons discussed in claim 1 and for the reasons of record.

Claim 15 is allowable for analogous reasons as in claim 1 at least because the art fails to suggest instructions to determine quality of a first set of seat availability information from a first source of availability information ... and if the quality of the seat availability information is low, execute a second set of seat availability queries to the first source or a different source of seat availability information ... .

Claims 16-20, which depend directly or indirectly from claim 15 are allowable at least for the reasons discussed in claim 15 and for the reasons of record.

Claim 21, which recites *inter alia* evaluating in the computer system a quality measure of seat availability information received from the first source of seat availability information, ... producing ... a second set of seat availability queries, to send to a different source of seat availability information based on evaluating quality of the availability information ... is not suggested at least for analogous reasons in claim 1.

Claims 22-27, which depend directly or indirectly from claim 21 are allowable at least for the reasons discussed in claim 21 and for the reasons of record.

Applicant contends that since Lynch '094 was the base reference used in rejection of each of Applicant's claims and that Lynch '094 fails to suggest the features of those claims, as pointed out above, that the claims are allowable Applicant further contends that no combination of

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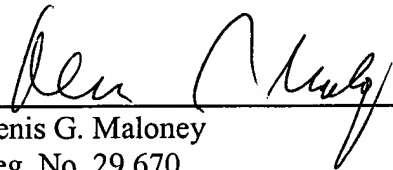
Lynch '094 with Lynch '114, Walker '620, Hornick '921, Slotznick '200 and/or Official Notice cures the deficiencies in Lynch '094. Moreover, these claims add distinct features over the combinations of art as discussed of record.

This Reply is accompanied by a Notice of Appeal.

No fee is believed due. If a fee is due, please apply that fee and any other charges or credits to deposit account 06-1050 referencing the above attorney docket number.

Respectfully submitted,

Date: 7/10/06

  
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